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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,501	06/15/2005	Graham Hodgson	66221-0035	5919

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RADER, FISHMAN & GRAUER PLLC  
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SUITE 140  
BLOOMFIELD HILLS, MI 48304-0610

EXAMINER
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YAKULIS, JEFFREY C

ART UNIT	PAPER NUMBER
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1795

MAIL DATE	DELIVERY MODE
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10/09/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/520,501

Applicant(s)

HODGSON ET AL.

Examiner

Jeff Yakulis

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 16-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/4/2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Information Disclosure Statement*

1. The GB search report dated October 2002 and international search report dated September 2003 were considered but lined through because they are not prior art documents made available to the public.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 16, 18, 19, and 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Tharp (6,210,549).

Regarding claims 16 and 30, Tharp teaches a skirt wall [30] with an anode [18] disposed within the aperture formed by the skirt wall [30] and a power supplying all-thread rod [7] (connection member) connected to the anode [18] (figure 2, col. 9 lines 14-36, col. 10 lines 56-59), the anode (allowing for electrical communication) mounting plate [6] (closure member) is connected to a gasket [31] which allows for sealing between the anode mounting plate [6] and the skirt wall [30] as well as electrically isolating (non-conductive) the anode mounting plate from the cell head plate is disposed between the skirt wall [30] and the anode mounting plate [6] (closure member) (col. 11 lines 32-37 and col. 13 lines 10-24).

Regarding claim 18 and 19, Tharp teaches the sealing gasket (spacer member) [31] surrounding the power supply rod (anode connection member) [7]; the sealing gasket [31] (spacer member) would inherently be annular because it surrounds a rod [7] an annular object (figure 2, col. 11 33-37, and col. 10 56-59).

Regarding claim 27, Tharp teaches the anode all-thread rod [7] connected to anode [18] is secured in place by a mounting connection (mechanical fastener) [8] (figure 2, col. 11 lines 38-51).

Regarding claim 28 and 29, Tharp teaches a cell head plate (auxiliary closure member) [2] for further closing off the cell structure coupled to the anode mounting plate (skirt wall closure member) [6] and engaged by a gasket [31] used for sealing both head plates (col. 11 lines 31-37 and col. 14 lines 40-53).

***Claim Rejections - 35 USC § 103***

4. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tharp (6,210,549) as applied to claim 16 above, and further in view of Oka et al. (JP2002161387).

Regarding claim 17, Tharp teaches all the limitations of claim 16 above but is silent to the composition of the non-conductive spacer/sealing member.

Oka et al. teaches a connection member for the anode in fluorine electrolytic cell (paragraph 1). Oka et al. teaches making a sealing member out of a ceramic preferably alumina because of its good electrical insulation properties and corrosion resistance (paragraph 14 and 23, drawing 3).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the non conductive sealing/spacer member discussed by Tharp with the alumina ceramic sealing member taught by Oka et al. because it would allow for strong electrical insulation and corrosion resistance

5. Claim 20-21, 24-25, 31-32, and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tharp (6,210,549) in view of Pohto (4,354,916).

Regarding claim 20, 21, 31, 32, 35, and 36, Tharp teaches a skirt wall [30] with an anode [18] disposed within the aperture formed by the skirt wall [30] and a power supplying all-thread rod [7] (connection member) connected to the anode [18] (figure 2, col. 9 lines 14-36, col. 10 lines 56-59), the anode (allowing for electrical communication) mounting plate [6] (closure member) is connected to a gasket [31] which allows for sealing between the anode mounting plate [6] and the skirt wall [30] as well as electrically isolating (non-conductive) the anode mounting plate from the cell head plate is disposed between the skirt wall [30] and the anode mounting plate [6] (closure member) (col. 11 lines 32-37 and col. 13 lines 10-24) but fails to disclose gaskets disposed at either side of the spacer member.

Pohto is directed toward a fluid/gas tight components for joining together a cathode plate and an anode plate in an electrolytic cell (abstract). Pohto teaches gaskets of the spiral wound variety are useful in allowing for fluid/air tight sealing between bipolar components in an electrolytic cell (col. 3 lines 22-28 and col. 4 lines 20-42).

Art Unit: 1753

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use spiral wound gaskets as discussed by Pohto and position them above and below the non-conductive sealing member discussed by Tharp because it would allow for a gas tight electrolytic cell thus preventing leaking of fluorine gas into the ambient atmosphere.

Regarding claims 24 and 25, Pohto further discloses washers [20] (keeper rings) disposed on either side of the spiral/coils [15] in order to maintain pressure between the plates (col. 4 lines 20-42).

6. Claims 22, 23, 33, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tharp (6,210,549) and Pohto (4,354,916) as applied to claim 20 above, and further in view of Arenas (4,544,078).

Regarding claims 22, 23, 33, and 34, modified Tharp teaches all the limitations of claim 20 above but fails to disclose a metal bead gasket embossed in a metal plate.

Arenas teaches a method of sealing an opening in containers to make fluid tight seals in order to prevent leakage (abstract), especially useful in sealing an electrolytic cell (col. 5 lines 41-43). Arenas teaches a plug member that is a metal sealing ball [40] embossed with a plate like metal (nickel or stainless steal) plug member [42] having a plate like structure at the bottom (col. 6 lines 34-61, figure 1 and 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a metal ball coupled to a metal plate to form a sealing gasket as done by Arenas et al. and use it in the sealing apparatus taught by Tharp

Art Unit: 1753

because it would allow for effective sealing of the electrolytic cell thus preventing leaking of the fluids within.

7. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tharp (6,210,549) as applied to claim 16 above, and further in view of Graham et al. (5,688,384).

Regarding claim 26, Tharp teaches all the limitations of claim 16 mentioned above but fails to disclose welding the anode connection member to the upper closure area.

Graham et al. is directed toward an electrolytic fluorine cell having a skirt wall and suspended anode within an electrolyte (abstract and figure 1). Graham et al. teaches an anode suspended from a steel rod and welded to the underside of the lid [26] (col. 6 lines 56-61).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to weld the anode connector to the sealing lid of a fluorine electrolytic cell as done by Graham et al. and use it as a connection in the fluorine electrolytic cell taught by Hodgson because it would allow for a means of effectively connected the connection rod to the upper closure member.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Yakulis whose telephone number is 571-272-9807. The examiner can normally be reached on M-F 9:30 AM-7:00 PM.

Art Unit: 1753

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCY

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ALEXA D. NECKEL  
SUPERVISORY PATENT EXAMINER